Is Privatization Related With Macroeconomic Management? Evidence From Some Selected African Countries.

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Abstract

Has macroeconomic management succeeded in making privatization promote growth in Africa? What are the probable strategies that should accompany the privatization reform process to promote growth in Africa? To what extent has the privatization process succeeded in attracting foreign direct investment to Africa? The study investigates the relationship between macroeconomic management and privatization. Many African countries have embarked on one form of privatization reform or the other since 1980 as one of the stringent conditions for accessing capital from the IMF and the World Bank. Secondly globalization and the gradually integration of the African economy into the global economy also means that Africa has to strategically develop its domestic market to cushion itself from fluctuations and probable contagion associated with global economic crisis that are always inevitable Stiglitz (2000) and Ojeaga P. (2012). The methods of estimation used are the OLS, linear mixed effects (LME), 2SLS and the GMM method of estimation. It was found that macroeconomic management has the capacity to affect the success of the privatization reform process. It was also found that privatization was not promoting growth in Africa; privatization could promote growth if long run growth strategies are implemented together with the privatization reform process. Privatization was also found not to have the capacity to attract foreign investment to many African countries.

Keywords: Africa, Political Economy, Game Theory, Macroeconomic Management and Privatization,

JEL Classification: C23,C70,E61,E62,F42,G25,H5,L16,O11,O23.

1.0 Introduction

In this section we introduce the topic under discussion. There is currently a strong and heated argument that privatization has not been very successful in many parts of Africa. There is also evidence that institutions can have strong effects for growth in many developing and emerging economics Acemoglu D., Johnson S. and Robinson J. (2001). The quest for growth is also one of the major factors that led to the implementation of privatization reforms in many African countries Easterly (2001).

Privatization is the process of reallocation of assets from the public to the privates sector for better management and to improve efficiency of firms, making privatization to be a way of improving a nation's economy and searching for elusive growth Mankiw (2001). Soto (1996), states that free market economies are a way of enshrining property rights and leads to massive exchange of low cost goods thereby fostering specialization and greater productivity, privatization itself is based on the concepts of free markets.

According to Poole (1996), between 1984 and 1996 there has been a total transfer of about 468 billion dollars in assets from the public to the private sector worldwide. A major contributing factor to the increase in privatization is also the fall of communism in Eastern Europe and the former Soviet Union. Privatization has also spread to other countries such as Japan and Mexico in Asia and Latin America, who have privatized a sizeable amount of government owned enterprises Meggisson, Nash and Radenbourgh (1996).

Macroeconomic management can also have strong effects on growth Stiglitz (2000)[1]. There exist different facets of macroeconomic management which can include the fiscal, monetary, trade and institutional factors that are intertwined to define the macroeconomic management process. This paper investigates if there is a relationship between privatization and macroeconomic management. A host of macroeconomic variables could in fact pose a challenge to a successful privatization reform process such as the institutional quality which can affect the business environment, country specific attractiveness for commerce, the riskiness of the business environment which is determined by country specific monetary policy and finally issues of property rights, legal redress and ownership.

Stiglitz (2000) discusses extensively that globalization (economic liberalization) takes place in stages beginning with financial sector reforms, market liberalization and privatization and finally institutional reforms. This paper studies the effect of some macro-economic variables on privatization in Africa, using some selected 10 African countries Egypt, Algeria, Nigeria, Ghana, Cameroon, Angola, Kenya, Uganda, South Africa and Botswana for a period of 53 years (1960 to 2012) although some years of data are missing. The method of estimation used are the OLS, mixed effect linear regression, two stage least squares and the general method of moment (GMM). The last two are relied on due to the endogeneity of the institutional variable. The rest of the paper is divided into the scope and objective of the study, stylized facts on privatization and

[1] The seminar paper by Stiglitz (2000) "Whither Reform" points out that privatization without institutional reform drives corruption and makes macroeconomic management ineffective.

macroeconomic management, review of literature, theory and methodology, data and sources, results and finally the concluding sections.

1.1Scope and Objective of Study

In this section we present the scope and objectives of the study. The study presents insights on how some macroeconomic factors affect the privatization reform process, thereby studying the relationship between privatization and macroeconomic management in some selected African countries. The objectives of the study are a.) To examine which macroeconomic variables affect the privatization process in Africa? b.) To determine if the privatization process has succeeded in promoting growth? c.) To ascertain if privatization has attracted foreign direct investment to the continent? The study will provide useful evidence for policy makers who to evaluate the impact of macroeconomic management on the privatization process and growth.

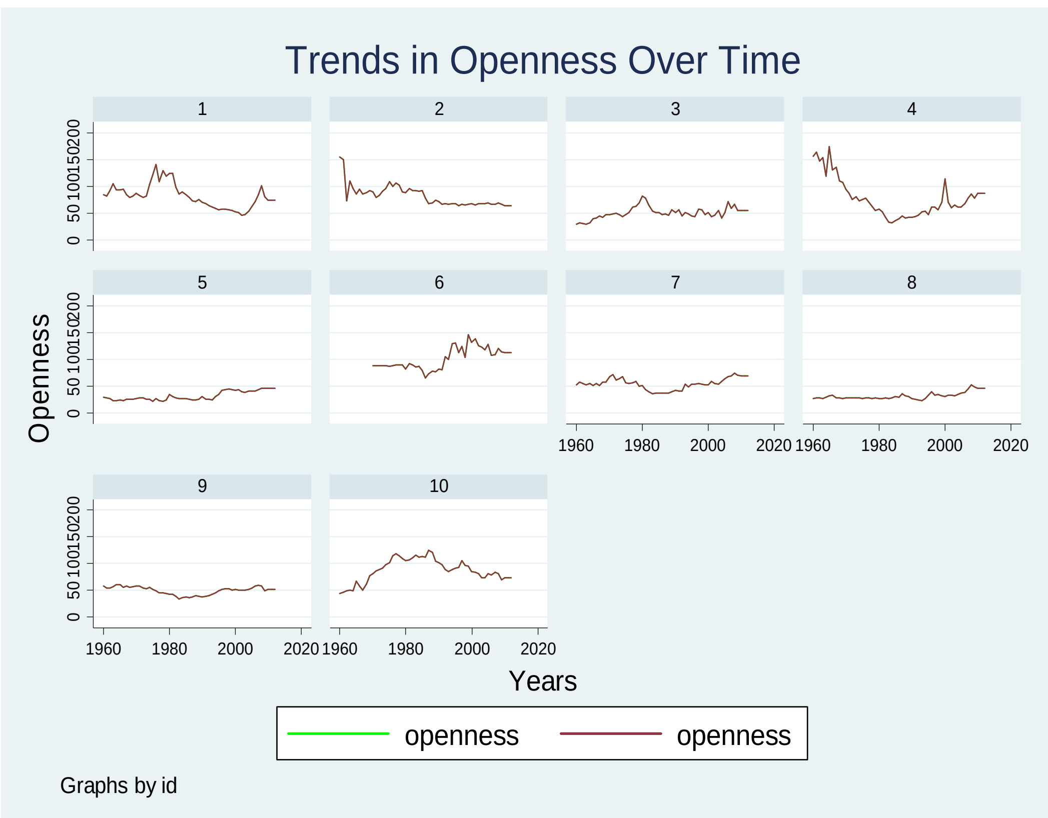
1.2 Stylized Facts on Privatization and Macroeconomic Management

Trends show that openness has not experienced significant increases in Africa. While minimal increases were recorded in the 1980s the degree of openness has not managed to return to the pre 1990 period.

There are also increases in government expenditure spending depicting that government were probably spending more on infrastructural provision or consumption in countries. Inflation is also on the high side with an average of 5 percent among countries.

Flow of credit to the private sector our measure of privatization is on the decrease for North, West and Central Africa with East and Southern Africa experiencing relative increases in credit flow. The implication of this is that the privatization process has not yielded sufficient results since the private sector still finds it difficult to access credit, thereby depicting the riskiness of the African business environment, Ojeaga, Odejimi and Ojeaga (2013).

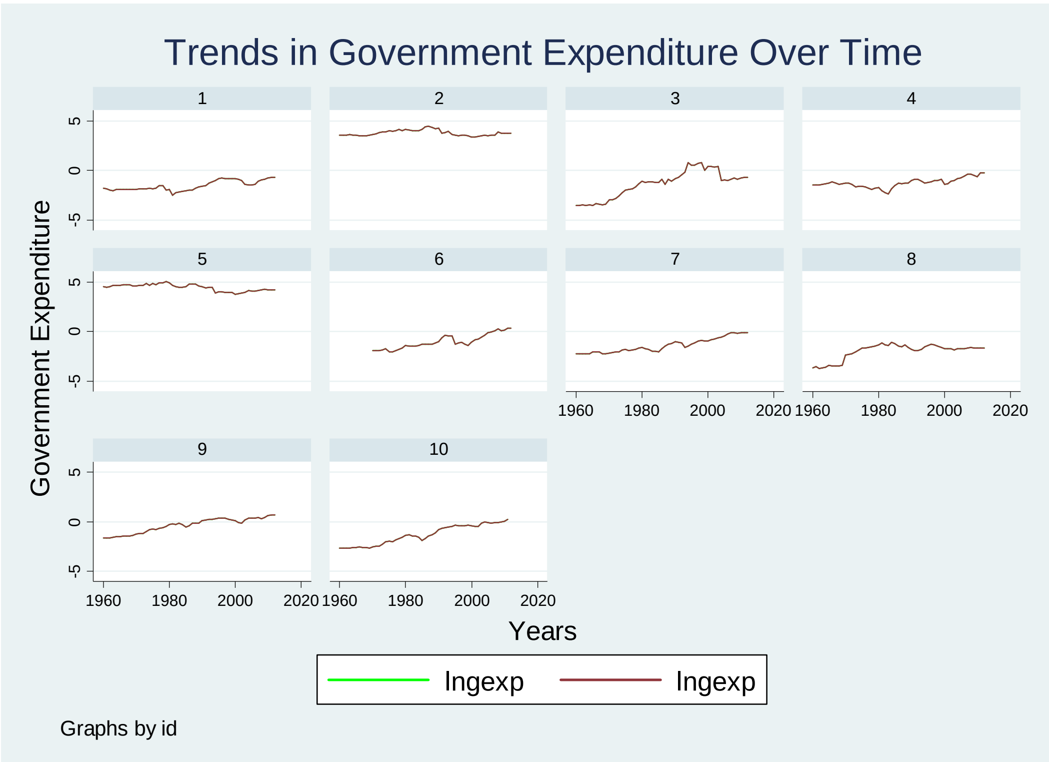
Fig. 1



Note: The above trends depict openness for the ten African countries in our sample Egypt, Algeria, Nigeria, Ghana, Cameroon, Angola, Uganda, Kenya, South Africa and Botswana. Openness is the ratio of exports to imports in the ten countries.

Another implication for private sector businesses is that loan accumulation will be low, depicting that business were probably averse to borrowing and could affect the overall privatization process since firms are likely to migrate to more business friendly regions.

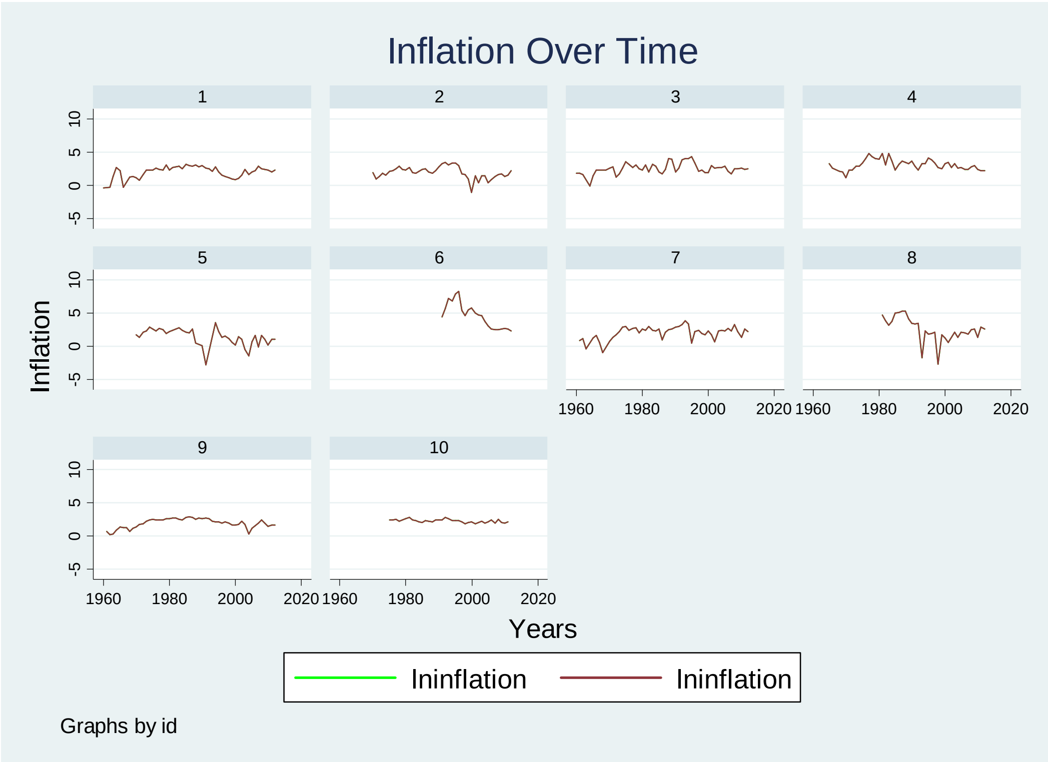
Fig. 2



Note: The above trends depict openness for the ten African countries in our sample Egypt, Algeria, Nigeria, Ghana, Cameroon, Angola, Uganda, Kenya, South Africa and Botswana. Government expenditure spending is the aggregate expenditure of government in years in constant USD.

Banks were also failing in their primary responsibility of lending to private sector business, interest rates are high and this has strong consequences for firms since it has a reducing effect on their profit margins, preventing firms from borrowing.

Fig. 3

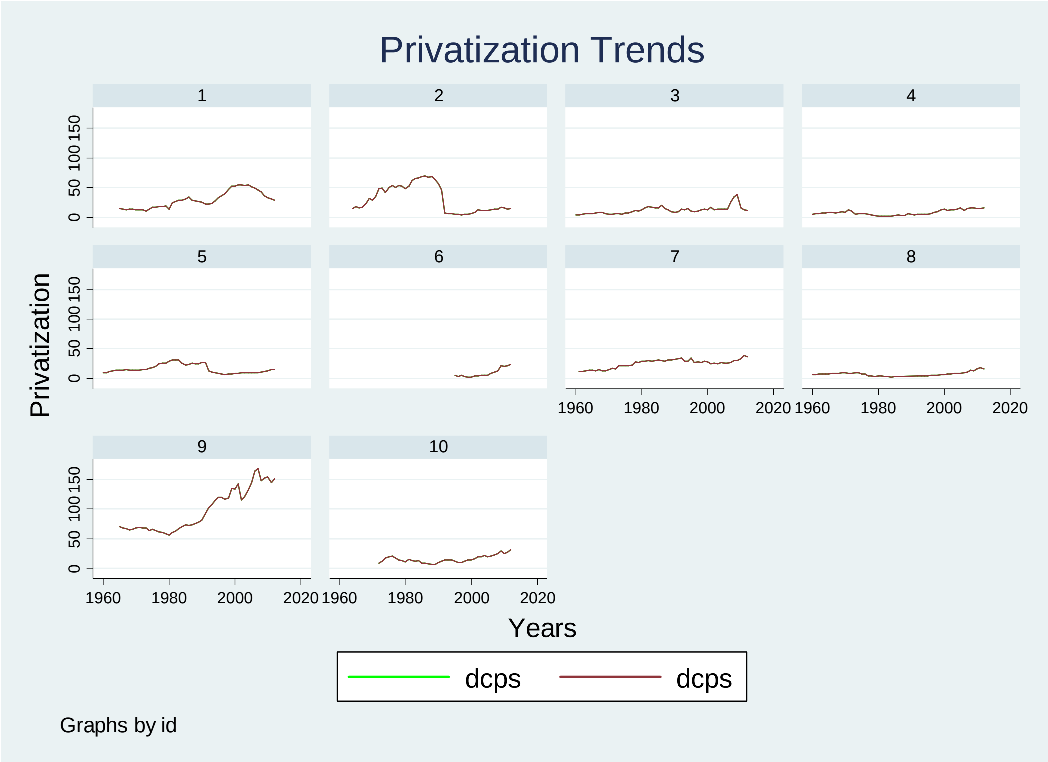


Note: The above trends depict openness for the ten African countries in our sample Egypt, Algeria, Nigeria, Ghana, Cameroon, Angola, Uganda, Kenya, South Africa and Botswana. Inflation is the increment in average prices over time in percentage.

Africa lags behind in property rights protection, institutional weaknesses also plagues many African economies making it to be less attractive for foreign business and presenting enormous entry barriers despite the abundance of natural resource and low cost of labour which could attract trade to many African countries.

Poor oversight function is also another challenge with incidences of judicial weaknesses, extrajudicial malpractices and high level of corruption in government which often affects investor's perception.

Fig. 4

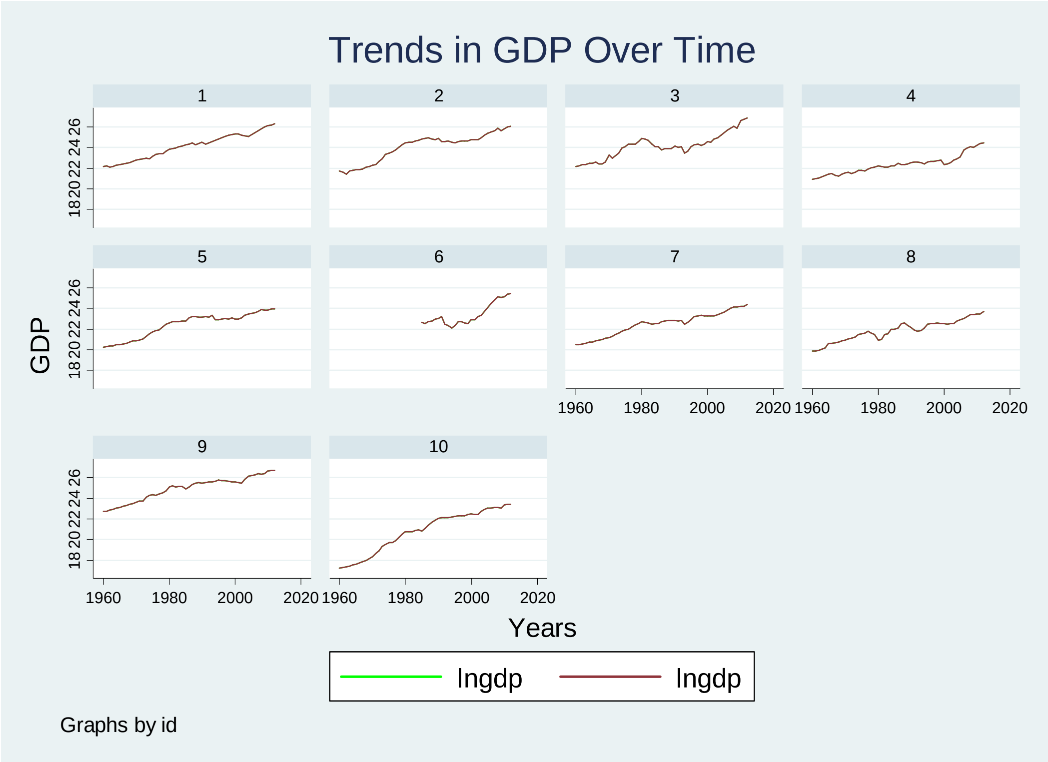


Note: The above trends depict openness for the ten African countries in our sample Egypt, Algeria, Nigeria, Ghana, Cameroon, Angola, Uganda, Kenya, South Africa and Botswana. Direct credit to the private sector is all credit granted to the private sector in constant USD.

Improved institutions could have strong effects on trade, returns on investment and could stimulate local entrepreneurship in many African economies Stiglitz (2000). Poverty reduction is another likely advantage that the strengthening of institutions could achieve.

Inequality could be reduced to the barest minimum if government strengthens existing institutions and provide basic social infrastructural services. Skill could be improved considerably, through better education curriculums and access to proper and useful education that can provide employable manpower in many African countries.

Fig. 5

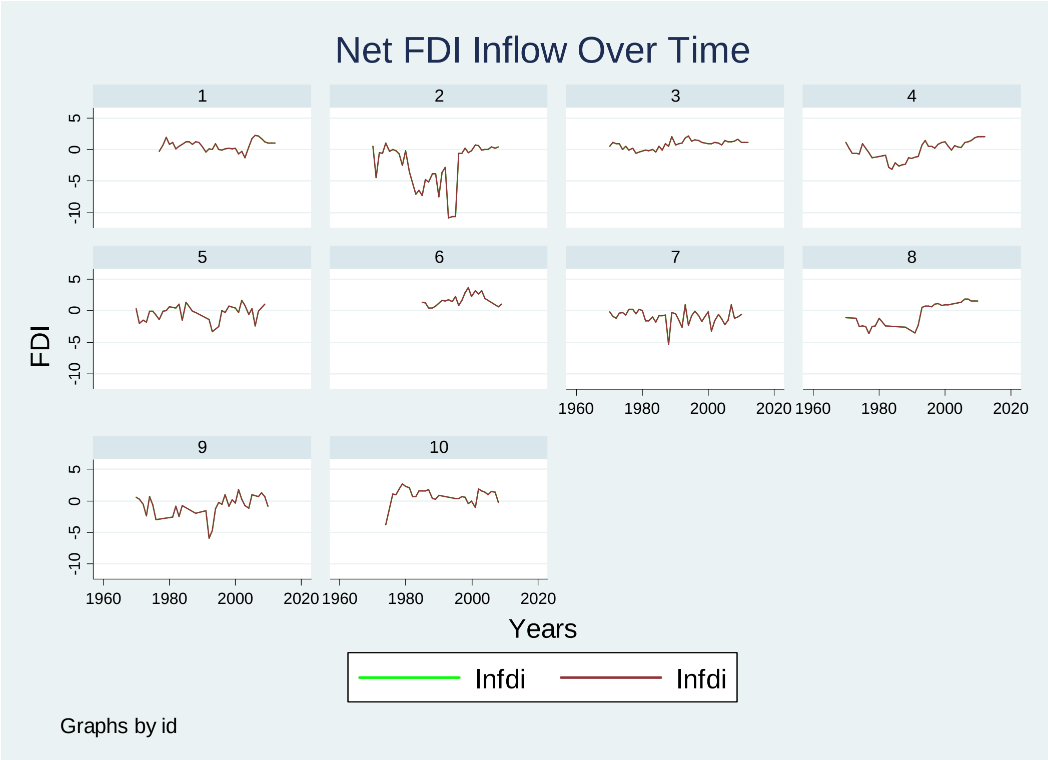


Note: The above trends depict openness for the ten African countries in our sample Egypt, Algeria, Nigeria, Ghana, Cameroon, Angola, Uganda, Kenya, South Africa and Botswana. GDP is the total goods and services produced in countries in constant USD.

GDP is also on the increase with strong increases noticeable between 2000 till date. This is attributable to sustained high prices of global commodities otherwise known as the commodity boom, which is currently driving growth in many African economies.

Net FDI appears to be positive depicting that Africa was managing to attract FDI despite the hostile nature of its business environment. The nature of such investment are likely to be in the natural resources sector although services such the telecommunications sector is also attracting huge investments.

Fig. 6



Note: The above trends depict openness for the ten African countries in our sample Egypt, Algeria, Nigeria, Ghana, Cameroon, Angola, Uganda, Kenya, South Africa and Botswana. FDI is the aggregate foreign direct investment inflow in constant USD.

1.3 Review of Literature

In this section we review past and current literature relevant to the topic under study. According to Cook and Uchida (2003)[2], there are numerous reasons why countries might want to embark on the privatization process, one of the chief concerns are those of cost efficiency and curbing wastages. State ownership of assets also crowds out investment from the private sector. Others however argue that the normative view that privatization was going to curb wastage were in fact not the only reasons for instituting privatization reforms, stating that privatization is likely to lead to public welfare maximization.

[2] See also Harsch (2000) and Konai (2000) for further discussion on how privatization curbs wastages.

World Bank Report (2002), points out that privatization has the capability to attract foreign direct investment to countries. Sachs (1992)[3] also expresses fears regarding the expected gains of privatization stating that privatization is often urgent and politically vulnerable. This is particularly true since most privatization reforms are often carried out during national economic downturn. Neoliberals argue that price and trade liberalization coupled with privatization and macroeconomic stabilization is significant in the economic restructuring process and has the capability of driving growth in Africa and achieving convergence with the west Sachs (1994).

The European Bank for Reconstruction and Development (EBRD), Transition Report 1999 reiterate that private ownership has the capability of ensuring profit-oriented corporate governance. Trade and price liberalization on the other hand could create an environment of competition that attracts gains from profitable activities.

Privatization reforms are often carried out after a period of failure to achieve the quest for growth. As pointed out by Lipton and Sachs (1990), Blanchard et al (1991) and Frydman, Rapaczyski and Turkowitz (1997) the fall of communism offered a window for the implementation of privatization reforms particularly in Eastern Europe. With economic problems in Eastern Europe and parts of Africa in the 1980s the need for the rapid privatization of public enterprises posed strong challenges for economists and policy makers Hamm, King and Stuckler (2012). While economists have understood how to liberalize and stabilize economies, the idea of privatization of an entire economy was quite new.

[3] See Sachs (1992) for further discussion regarding the uncertainty surrounding privatization outcomes.

Ellerman (2003) reviewed the effect of foreign capital, on the privatization process for Russian and other parts of eastern Europe and found that foreign capital were often rejected by social elites due to issues of economic nationalism. Foreign investors were also found not to be willing to pay vast sums for obsolete Soviet firms. Suggesting that employee share ownership, were another quick method of privatization which could concentrate ownership in the hands individual employee and prevent cases of hostile takeover.

Burawoy (1996) and Hamm, King and Stuckler (2012), after studying Chinas trajectory to growth also state that privatization reforms should be implemented with caution. They insist that privatization might lead to asset stripping rather than investment warning that such predatory investment might harm growth.

Nellis (2008) argues that even though privatization reforms are more beneficial in countries with good legal framework and secured property rights, World international financial institutions such as the World Bank and IMF termed “shock therapists” are often of the view that nations are often better off with a flawed privatization than delayed divestiture.

Ashlund (2002) argues extensively that despite the failure of privatization no economy has been known to suffer from “too radical reforms” allowing us to conclude that privatization could drive growth even though the effects are not likely to be immediate. Other studies such Bennet et al (2004: 2007) also conclude that privatization is beneficial to growth offering support for this using econometric analyses. For full review of the privatization literature see Burawoy (1996) and Hamm, King and Stuckler (2012) for further discussion.

2.0 Theory and Methodological Review

In this section we present the theory on privatization and the methodology for the study. We present the privatization reform process as a two person game i.e. the principal agent contract with agency problems. Privatization will be successful in cases where there are no predatory takeovers of public enterprises. Investors will always cater to their own interest except some regulatory a framework was set in place; making the public welfare maximization needs of the privatization process to be unattainable and growth to be elusive in the absence of some regulatory measure.

The privatization process effectively can now be viewed as a contract between public firms (in most cases owned by government the owner of the public assets to be divested from) and potential investors. Milgrom and Roberts (1992) point out four basic principles contract design, they include informativeness principle which is based on the premise that performance is based on the effort exerted by the agent, incentive intensity principle which is based on four factors which include profits increments, precision in carrying out desired activities, agents risk tolerance and agent reaction to incentives see also Holmstrom (1979). The monitoring intensity principle which states that optimal incentive will correspond to optimal monitoring see also Prendergast (1999) and finally the equal compensation principle which is based on the condition that activities valued by the principal should be equally valuable to the agent.

To analyze the privatization issue we present a simple normal form game to capture principal agency problems under the assumption that the privatization process now becomes contract that is written in a World of asymmetric information, uncertainty and risk.

Table 1. A Simple Privatization Normal Form Game

	State 1 **Investors (Invest)**	**State 2** **Investors (Do not invest)**
Condition A **Government (Monitors)**	*Welfare Maximized for both parties (Returns gained for both government and investors) Improves Competition (Payoff A1) (1,1)- Nash Equilibrium*	*(Minimum benefit for Government) Government continues to manage obtaining low returns due to little competition. (Payoff 2) (1.0)*
Condition B **Government (Does not monitors)**	*(Welfare Maximized for investors) Returns for only Investors.* *(Payoff B1) (0,1)*	*Welfare not maximized for both parties (Government continues to lose). (Payoff B2) (0,0)*

Note: The table above presents the privatization process strategy in the presence of adequate oversight (monitoring) and no oversight (absence of monitoring) as a normal form game to capture privatization as a contract written in a World of asymmetric information, uncertainty and risk.

The outcome will result in different payoffs for both parties concerned. Under **condition A** that government monitors, if investors will invest will depend on a host of factors such as property rights laws as depicted by degree of openness to trade, quality of institutions, business environment riskiness as reflected by inflation and price fluctuations, market potential, and government fiscal policies. All things being equal if investors invest the welfare of the investors and that of the public government will be maximized and growth will be attained. If investors fail to invest under **Condition A**, government continues to manage public enterprises however gains will be low owing to poor competitive environments.

Under **Condition B** in which there is no government monitoring there will be a case of high risks associated with investment, if investors invest, here the welfare of the investor will be maximized since investors will engage in predatory investment and take advantage of the market to the detriment of the public welfare here growth will not be attained.

If investors fail to invest and the institutional and legal framework for oversights which is the measure of monitoring are not in place public firms will continue to incur losses, as a result of rent seeking public officials. In stating the model we assume the case of **condition B**, to be reminiscent of the privatization process in many parts of Africa with poor legal framework and institutional deficiencies. Based on these we state the following;

a.) Privatization will only drive growth in economies where there are strong legal frameworks and after effective institutional reforms.
b.) Predatory investment is likely to reduce the potential gains from the privatization process.
c.) Risky business environment might prevent the privatization reform process from attracting investment in Africa.
d.) Incentives for investors might be strategic in attracting investment and making the privatization program successful.

In identifying the model we begin by describing the factors that will inform our analysis. If privatization begins to take effect, businesses will experiences changes in the immediate business environment influenced by the privatization reform process allowing us to state that direct capital to the private sector (DCPS) will be a function of the business environment (BUSENV) and the privatization reform process (PRIVREF).

(1.) $DCPS = BUSENV + PRIVREF$

The effect of macroeconomic management (MEM) will also be described as a function of three major macroeconomic variables for the purpose of the study, which include a measure of the riskiness of the immediate business environment represented by inflation trends (INF) which captures the monetary policy effectiveness, openness to trade (OPEN) which will depict country specific trade policy and exchange rate (EXCRATE) which depicts how a country macroeconomic policy will respond to fluctuation in the global market which are likely to have a back effect on its trade balance sheet.

(2.) $MEM = INF + OPEN + EXCRATE$

Institutions (INST) will also be a function of oversight regulatory framework (OVERSIGHT) since handing off businesses; will allow government to focus on its responsibility of regulation and enforcement (LEGALFRW), which will be a function of judicial efficiency. Institutions in Africa are known to be weak in general; its efficiency ineffectiveness is in most cases not in carrying out its regulatory activities but in effectively enforcing the law.

(3.) $INST = OVERSIGHT + LEGALFRW$

Foreign direct investment (FDI) will also be influenced by country specific market potential (MARPOT) such as resource presence, strong domestic market such as in China and India and the transaction cost (TRCOST) in investment destination countries.

(4.) $FDIINFLOW = MARPOT + TRCOST$

Privatization itself will be a function country specific macroeconomic policy (MEM) which will be particularly true since countries who want to privatize will have to make reasonable macroeconomic policy adjustments before the privatization reform process and transaction cost (TRCOST) which will inform investors opinion and be a likely motivation for investors to invest in countries other than theirs due to relative low taxes, cheap labour and overall cost of production in investment bound destinations.

(5.) $PRIV = MEM + TRCOST$

Growth will also be expressed as a function of labour, capital and technology which will depend on country specific institutional framework regarding wages, loan acquisition and investment in domestic innovation as captured by the institutional variable (INST) and other factors such as country specific macroeconomic management (MEM) quality, the privatization process (PRIV) and foreign direct investment (FDI) which can have useful implication for growth in Africa.

(6.) $GROWTH = PRIV + MEM + INST + FDI$

The Foreign investment inflow (FDI) equation can now be expanded to include three additional factors which include the privatization process (PRIV), macroeconomic management (MEM), institutions (INST) and two previous factors market potential (MARPOT) and Transaction cost as depicted by cost of transportation (TRCOST) with the last three shaping investor’s perception to a high degree.

(7.) $FDI = PRIV + MEM + INST + MARPOT$

Three different models are utilized in the study. In an attempt to understand what drives countries to privatize the first model analyses the determinant of privatization here Privatization is expressed as a function of institutions and other list of variables which include FDI, openness, inflation, exchange rates, government expenditure spending, market potential, exports and transportation cost.

PRIV f (INST, FDI, OPEN, INF, EXC, GOVEXP, MARPT, EXP and TRCOST)

The second model examines the effect of the privatization process on growth other variables included as controls include FDI, openness, inflation, exchange rates, government expenditure spending, market potential, exports and transportation cost.

GDP f (PRIV, INST, FDI, OPEN, INF, EXC, GOVEXP, MARPT, EXP and TRCOST)

The third model examines the effect of the privatization process in attracting investment other variables included as controls include GDP, openness, inflation, exchange rates, government expenditure spending, market potential, exports and transportation cost.

FDI f (PRIV, INST, GDP, OPEN, INF, EXC, GOVEXP, MARPT, EXP and TRCOST)

The first model has three different specifications which are examined using the linear; the two stage least squares instrumental variable and general method of moment specifications as shown below in equations 8a to 8d. Equation 8 a shows the simple linear specification of the model estimated using OLS and linear mixed effect estimation technique. The control of the endogeneity of the institutional variable is conducted in equations 8b and 8c respectively and estimated using the two stage least squares instrumental variable technique. In equation 8 d the model is estimated using the GMM estimation technique. The reason for this is to depict that estimating the model specification without controlling for the presence of endogenous regressors could lead to biased results.

(8a.) $Priv_{i,t} = \alpha_0 + \alpha_1 INST_{i,t} + \alpha_2 X_{i,t} + u_{i,t}$

(8b.) $INST_{i,t} = \alpha_0 + \alpha_1 POL_{i,t} + \alpha_2 X_{i,t} + u_{i,t}$
(8c.) $Priv_{i,t} = \alpha_0 + \alpha_1 INST_{i,t} + \alpha_2 X_{i,t} + u_{i,t}$

(8d.) $Priv_{i,t} = (\alpha_o - 1)Priv_{t-1} + \alpha_1 INST_{i,t} + \alpha_2 X_{i,t} + \epsilon_{i,t}$

The privatization effect on growth is also estimated, the model is also estimated using the above three techniques and the control for the endogeneity of the institutional variable is also conducted in equations 9b and 9 c respectively.

(9a.) $Growth_{i,t} = \alpha_0 + \alpha_1 PRIV_{i,t} + \alpha_2 INST_{i,t} + \alpha_3 X_{i,t} + u_{i,t}$

(9b.) $INST_{i,t} = \alpha_0 + \alpha_1 POL_{i,t} + \alpha_2 X_{i,t} + u_{i,t}$
(9c.) $Growth_{i,t} = \alpha_0 + \alpha_1 PRIV_{i,t} + \alpha_2 INST_{i,t} + \alpha_3 X_{i,t} + u_{i,t}$

(9d.) $Growth_{i,t} = (\alpha_o - 1)Growth_{t-1} + \alpha_1 PRIV_{i,t} + \alpha_2 INST_{i,t} + \alpha_3 X_{i,t} + \epsilon_{i,t}$

The effect of the privatization on foreign direct investment is also considered the model specifications are expressed below in equation 10a to 10 d. The correction of the institutional variable is also conducted in equation 10b and 10 c. The model is also estimated using GMM estimation technique in equation 10d.

(10a.) $FDI_{i,t} = \alpha_0 + \alpha_1 PRIV_{i,t} + \alpha_2 INST_{i,t} + \alpha_3 X_{i,t} + u_{i,t}$

(10b.) $INST_{i,t} = \alpha_0 + \alpha_1 POL_{i,t} + \alpha_2 X_{i,t} + u_{i,t}$
(10c.) $FDI_{i,t} = \alpha_0 + \alpha_1 PRIV_{i,t} + \alpha_2 INST_{i,t} + \alpha_3 X_{i,t} + u_{i,t}$

(10d.) $FDI_{i,t} = (\alpha_o - 1)FDI_{t-1} + \alpha_1 PRIV_{i,t} + \alpha_2 INST_{i,t} + \alpha_3 X_{i,t} + \epsilon_{i,t}$

All explanatory variables are lagged to resolve issues of multi-co linearity and serial correlation although this was done for only one period. The variable year dummy is included to control for robustness in the estimation results while the country dummy results are not reported even though they are included in the regression. The control for the endogeneity of the institutional variable is based on past literature which suggests that institutions are endogenous Przewoski A. (2004). The use of GMM in addition to control for multiple endogenous variables, deals with issues of panel bias and fixed effects since the disturbance term $\epsilon_{i,t}$ consist of the fixed effects $\mu_{i,t}$ and the idiosyncratic shocks $v_{i,t}$ see Arrellano Bond (1998), Bond (1998), Doormik, Arellano, Bond (2002) and Roodman (2009). Some other obvious advantages of the GMM estimation are that it controls for long run effects and the estimates are robust even in the presence of heteroscedastic errors. The lag of the dependent variable $(\alpha_o - 1)$ is also added as an explanatory variable and the system GMM includes all explanatory variable and their lag values as instruments allowing us to overcome the problem of searching for a suitable instrument see Roodman (2009) for extensive explanation of the GMM estimator.

2.1 Data and Sources

In this section we describe all data used in the study and their sources. All data are obtained from the data market of Iceland unless otherwise stated. A panel of ten African countries are used in the study two from each of the five major regional blocs (i.e. Algeria, Egypt, Nigeria, Ghana, Cameroon, Angola, Kenya, Uganda, Botswana and South Africa) for a period of 53 years (i.e. 1960 to 2012), Direct credit to the private sector the measure for privatization is the flow, of private credit to private sector business in constant US dollars, GDP per capita our measure of growth and foreign direct investment foreign direct investment (FDI) are used as dependent variables interchangeably. Other list of explanatory variables include Institutions (INST) which is

Table-2 Descriptive Statistics Used in the Study

Variable	Observations	Mean	Std. Dev	Min	Max
Direct Credit to the Private Sector	462	25.69	29.53	1.54	167.54
Log of GDP per capita	505	0.31000	0.600000	0.160000	0.00003
Foreign Direct Investment (FDI)	155	8861	4464	26	16960
Institutions (Paved Road Network)	386	1091653	2106332	4700	12000000
Exports in Constant USD	459	28.37	14.72	3.34	89.62
Transportation Cost	530	38.09	25.94	9.34	99.71
Market Potential	530	27900000	29100000	524173	1700000000
Openness	520	64.16	29.31	22.30	174.70
Exchange Rate	514	108.34	315.93	0.000000025	2147.5
Inflation	436	39.01	249.72	-8.42	4145.11
Government Expenditure Spending	519	14.16	30.74	0.03	154.21
Index of Economic Policy	436	3980000000	4860000000	-21600000000	4145

Note: Descriptive statistics is derived from author’s dataset obtained from data market of Iceland and WDI data of the World Bank.

the length of paved road in Kilometers, exports which is total goods and services exported in constant USD, transaction cost of doing business is captured using average crude oil price which is a function of transportation cost, market potential depicts the domestic market attractiveness as a destination for finished products was captured using

Table-3. List of Variables and Description

Variables	Sources	Abbreviations	Description
Direct Credit to the Private Sector	Data Market of Iceland	DCPS	Credit granted to the private sector in constant USD.
Foreign Direct Investment	Data Market of Iceland	FDI	Aggregate inflow of investment over years in constant USD.
Gross Domestic Product	Data Market of Iceland	GDP/capita	Total goods and services produced in countries in constant USD
Institutions	Data Market of Iceland	INST	The measure for institution was the length of paved roads in kilometers
Openness	Data Market of Iceland	OPEN	This is the ration of exports to imports
Inflation	Data Market of Iceland	INF	This is the percentage changes in prices of community overtime.
Exchange Rate	Data Market of Iceland	EXC	This is the average local currency dollar exchange rate overtime.
Market Potential	Data Market of Iceland	MARPT	Domestic attractiveness of the local market for both foreign and local producers measured using population density.
Transportation Cost	Data Market of Iceland	TRCOST	Cost of crude oil overtime was used to capture the cost of transportation which represents the transaction cost of trade.
Exports	Data Market of Iceland	EXP	Aggregate goods and services exported overseas in constant USD.
Government Expenditure	Data Market of Iceland	GOVEXP	Government expenditure spending is the aggregate spending on consumption and infrastructure over time.
Index of Economic Policy	Authors Compilation	POL	Economic policy index constructed from the residual of inflation and openness on GDP (see Burnside and Dollar (2004))

Note: All data are obtained from Data Market of otherwise stated. The economic policy index is developed by authors.

population density and four macroeconomic variables namely openness which is the ratio of exports to imports, government expenditure spending which captures country specific fiscal spending, inflation which depict the riskiness of the immediate business environment and reflects the quality of a country's monetary policy and average local currency to dollar exchange rate. The table of descriptive statistics is presented above in Table 2. The variable description and sources are also explained in Table 3 above.

2.2 Empirical Analysis and Results

In this section we present the technical reasoning for the study and the results of the regressions. In studying the implication of the privatization reform process for Africa we rely on the conditions, that weak regulatory framework and poor monitoring of the privatization reform process is likely to hinder the possible gains that could accrue divesture from public firms by government. Allowing us to state that the states in Condition B is likely to be the possible states that the outcome of the privatization reform could have, for the payoff of government and firms in Africa. Our assertion is backed up by past literature that state that institutional weaknesses and poor oversight function of the regulatory agencies is likely to be responsible for the poor outcome of privatization reforms in Africa Stiglitz (2000) and Acemoglu D., Johnson S. and Robinson J. (2001).

The results of all regressions are presented in Tables 4 to 6. The Hausman Tahylor test was run to determine if fixed or random effect were most suitable for our estimation and the null hypothesis, that estimating the 2SLS equations using fixed effects were suitable for the model specification, were accepted at P- values of 0.01, 0.03 and 0.02 respectively, depicting that fixed effect estimation was more suitable due to the time varying nature of the data set. However we present the results of both the fixed effects and random effects estimation in our results.

The F-Tests for the OLS and LME regressions are high (149.5 and 108 respectively), depicting that the model captures significantly most factors that affect the dependent variable. The F-Test for instrumental validity were also quite high at 45.8, 78, and 104 respectively for the privatization, growth and FDI regressions allowing us to state that our instrument policy is valid since we use only one instrument in each case our model is exactly identified. The first stage results also show that our instruments are relevant since the instrument policy had a significant effect on institutions these results are omitted for the sake of brevity. The Sargan-Hansen test for over identifying restriction also shows that our instruments are valid, while we also accept the null hypothesis of no autocorrelation for the system GMM results. The GMM results, the preferred method of estimation show that institutions have no effect on the privatization process in Africa which is consistent with past literature Stiglitz (2000) and Acemoglu D., Johnson S. and Robinson J. (2001) see Table 4 Column 5.

Government spending the fiscal variable had a positive significant effect on privatization. Trade openness also had strong significant effect on privatization. The implication of this is that privatization was probably being driven by need to free up resources used in running and subsidizing inefficient public enterprises for infrastructural development to stimulate growth in the economy through healthy private sector competition. Openness was also having strong effect on privatization probably due to the liberalization of the economy, enshrining property rights and access to private ownership of firms.

The result in Table 5 Column 5 also shows that privatization also had no effect on growth in Africa. Market potential had a negative effect on growth showing that markets in Africa were still probably not developed enough to drive growth domestically and cushion the African economy from external shocks.

The result in Table 6 also shows that privatization was also not attracting FDI to Africa. The strongest factor attracting FDI to the continent was openness. Other factors that had significant effect on FDI inflow were government expenditure spending and exchange rates depicting once again the investors pay attention to country specific fiscal policy and the relative cheapness of transacting business in a country with devalued currency, which was probably attracting investments. Poor markets were also deterring FDI inflow while inflation also had a negative effect on investment inflow.

The set objectives of the study are realized,

a.) Two macroeconomic variables, openness and the fiscal variable- government spending - were found to have strong significant effect on Privatization.

b.) Privatization was found not to exert any effect on growth in Africa.

c.) Privatization was also found not to attract foreign direct investment to Africa.

Table -4 Factors That Promote the Privatization Process

VARIABLES	(1) OLS Privatization	(2) LME Privatization	(3) 2SLS RE Privatization	(4) 2SLS FE Privatization	(5) GMM Privatization
L.DCPS					1.02***
					(0.07)
L2.DCPS					0.17**
					(0.07)
INST	8.09***	8.09***	-6.56	6.20	2.07
	(8.58)	(8.58)	(9.57)	(7.52)	(3.08)
FDI	-0.78	-0.78	0.28	-0.75	-0.09
	(0.49)	(0.49)	(0.49)	(0.50)	(0.09)
INF	-0.004	-0.004	0.004	-0.004	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
OPEN	-0.15*	-0.15*	0.19	-0.15	0.07**
	(0.09)	(0.09)	(0.34)	(0.09)	(0.03)
GOVEXP.	0.04	0.04	0.71***	0.03	0.12***
	(0.05)	(0.05)	(0.11)	(0.07)	(0.03)
MARPT	1.68	1.68		2.51	-13.53
	(1.69)	(1.69)		(3.91)	(11.66)
EXC	-0.009	-0.009	-0.015	-0.01	0.003
	(0.01)	(0.01)	(0.01)	(0.02)	(0.004)
EXP	0.17	0.17	-0.72***	0.10	-0.08*
	(0.17)	(0.17)	(0.17)	(0.32)	(0.04)
TRCOST	-0.17	-0.17	-0.10	-0.13	-0.04
	(0.30)	(0.30)	(0.13)	(0.27)	(0.05)
Year Dummy	No	No	Yes	No	No
Observations	306	306	306	306	287
R-squared	0.388				
Number of id			10	10	10

Note: All standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.The results above show that privatization is undertaken by the need to stop subsidizing publicly owned firms and develop private ownership of businesses to stimulate competition.

Table-5 The Effect of Privatization on Growth in Africa

VARIABLES	(1) OLS GDP	(2) LME GDP	(3) 2SLS RE GDP	(4) 2SLS FE GDP	(5) GMM GDP
L.GDPPERCAP					1.34***
					(0.06)
L2.GDPPERCAP					0.37***
					(0.05)
DCPS	-3.75	-3.75	3.50	3.40	0.01
	(4.94)	(4.94)	(2.20)	(3.28)	(1.92)
INST	0.01***	0.01***	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
FDI	-7.90**	-7.90**	3.90	-3.38	8.82
	(3.89)	(3.89)	(3.62)	(6.35)	(5.81)
INF	-1.96***	-1.96***	-6.63	-1.89**	0.01
	(5.51)	(5.51)	(3.95)	(7.55)	(0.01)
OPEN	1.26*	1.26*	-3.11	1.94*	-3.23
	(7.11)	(7.11)	(3.18)	(1.13)	(2.30)
GOVEXP	-2.39***	-2.39***	-3.81**	-3.03***	-1.04
	(4.21)	(4.21)	(1.55)	(8.12)	(2.17)
MARPT	-3.57***	-3.57***	-3.21***	-3.24***	-3.11**
	(1.35)	(1.35)	(0.87)	(3.53)	(7.74)
EXC	8.33*	8.33*	-4.69	-7.91	-0.01
	(4.48)	(4.48)	(8.68)	(1.41)	(0.03)
EXP	6.68***	6.68***	2.24	2.50	1.59
	(1.35)	(1.35)	(1.62)	(3.73)	(2.92)
TRCOST	2.71	2.71	1.45	3.21	-2.83
	(2.35)	(2.35)	(1.11)	(3.15)	(3.22)
Year Dummy	No	No	Yes	Yes	Yes
Observations	306	306	306	306	292
R-squared	0.846				
Number of id			10	10	10

Note: All standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. The results above show that poor domestic markets were still an issue for many African countries and that this had negative implications for growth.

Table-6 The Effect of Privatization on FDI in Africa

VARIABLES	(1) OLS FDI	(2) LME FDI	(4) 2SLS RE FDI	(5) 2SLS FE FDI	(6) GMM FDI
L.FDI					0.27***
					(0.06)
L2.FDI					0.09
					(0.06)
LNGDPPERCAP	-199.6**	-199.6**	0.01	0.01	368.98*
	(98.18)	(98.18)	(0.02)	(0.02)	(190.45)
DCPS	-0.01*	-0.01*	-0.01	0.02	-0.01
	(0.01)	(0.01)	(0.03)	(0.02)	(0.02)
INST	2.29*	2.29*	4.04	-7.44	-3.00
	(1.30)	(1.30)	(6.37)	(5.06)	(2.11)
INF	-0.001	-0.001	-0.002*	-0.001	-0.002**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
OPEN	0.04***	0.04***	0.07*	0.04***	0.09***
	(0.01)	(0.01)	(0.04)	(0.01)	(0.02)
GOVEXP	-0.007	-0.007	0.02	-0.008	0.04*
	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)
MARPT	-0.01	-0.01	4.56	0.99***	-31.65***
	(0.41)	(0.41)	(3.99)	(0.28)	(7.53)
EXCH	0.003***	0.003***	0.001	0.002*	0.004*
	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
EXP	0.12***	0.12***	0.06*	0.08***	-0.03
	(0.021)	(0.021)	(0.03)	(0.03)	(0.03)
TRCOST	0.01	0.01	-0.01	0.01	0.01
	(0.04)	(0.04)	(0.02)	(0.03)	(0.03)
Year Dummy	No	No	No	Yes	Yes
Observations	306	306	306	306	285
R-squared	0.365				
Number of id			10	10	10

Note: All standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. The results show that investors are probably more confident to invest in countries with adequate property rights and less restriction for trade.

3.0 Implication of Privatization for Developing and Emerging Economies.

The implication of privatization for developing and emerging countries particularly those in Africa will be two fold. Considering results for the study for Africa, the first outcome will be that privatizing public enterprises will free up resources for further development purposes, allowing government to embark on infrastructural development that could create enabling environment for trade through the reduction of transaction cost and creating more accessibility to natural resource deposits from ports.

Secondly the privatization process will make many developing countries competitive since privatization will improve property rights laws and stimulate competition in the private sector. It will also allow foreign firms to take advantage of the low cost of labor and closeness to natural resources and destination markets for their goods as in the case of China, by siting production plants in well deserving developing countries with such incentives.

Based on the aforementioned results we can now draw the following implications for the privatization process as follows;

a.) That the gains from privatization are not likely to be immediate for many emerging and developing countries particularly those in Africa.

b.) Privatization is likely to free up resources to enable the development of infrastructure and creating enabling environment for trade. Therefore one of the roles of the privatization process is to make developing countries more attractive for foreign investors.

c.) Privatization is likely to stimulate competition and improve private participation in commerce through the development of private ownership of firms and encouraging entrepreneurship.

d.) A well monitored privatization process will be a win-win situation for both investors and government since it could lead to the maximization of both parties welfare.
e.) Privatization is likely to drive growth by developing domestic markets through increase in local participation in trade and commerce on the long run so as to insulate many developing African countries from global shocks.

f.) Finally the gains of privatization can be seriously affected by corruption Stiglitz (2000) and predative investments Levy (1989) since foreign firms with enormous capital strength could outlast domestic firms in price wars, thereby increasing the likelihood of predation. This threat can be overcome by creating efficient market systems in developing countries to stem imperfect (asymmetric) information.

3.1 Incorporating Growth Strategies in Developing Economies Privatization Process

It is clear that the gains of the privatization reform process are not likely to be immediate. The question we will like to ask is, what growth strategies should be implemented in conjunction with the privatization process to achieve growth? In trying to answer the question we will revisit our methodology review analysis of the simple privatization normal form game, where we state that both the government (owner of public firms) and potential investors will only seek their own personal interests. Welfare maximization therefore will be the end choice for both government (in this case welfare will be growth) and potential investors (in this case welfare will be profits).

Privatization is not likely to yield any useful results without some monitoring by government since investors will engage in predative activities that could harm the overall process and could have dire consequences for domestic firms. We list five potential strategies that should be implemented with the privatization process to drive growth, they include:

a.) Protection of domestic firms from predative concerns that can arise with the arrival of foreign firms, with enormous capital in many emerging countries, which could lead to price wars, should be ensured. Since the aim of lowering prices initially by predative investors, is to drive out other firms from the market and later increase such prices.
b.) Openness to trade particularly in sectors that are fairly established in domestic strength should be encouraged while developing sectors should be protected from hostile foreign competition.
c.) Technological cooperation between local and foreign firms should be encouraged to improve the services of domestic firms with the arrival of more competitive foreign firms.
d.) More transparency should be encouraged in the privatization process to reduce corruption and shore up investor's perception for investment in emerging African countries.
e.) Fiscal discipline should be developed since accountability in budgetary implementation can affect investor's perception in these countries.

Two important macroeconomic factors openness and fiscal discipline should be utilized side by side by government with the privatization process to stimulate growth in a strategic manner which we expressed below as

$$(11.)\ GROWTH = PRIV*MEM + INST + FDI + X$$

The protection of domestic firms from hostile competition and the promoting of cooperation between local and foreign firms could be instituted as conditionality for allowing the inflow of foreign direct investment particularly to attractive sectors in the economy, allowing government to use foreign invest in a strategic manner during the privatization process to make privatization drive growth which is expressed as

$$(12.)\ GROWTH = PRIV*FDI+MEM+INST+X$$

Finally improving the transparency of the privatization process will be a function of institutional factors that govern the bidding and privatization process. Transparent privatization processes can affect the overall privatization process by ensuring that firms go to well deserved private interests who have the capability to manage them allowing us to express this below again as

$$(13.)\ GROWTH = PRIV*INST+MEM+FDI+X$$

Where PRIV, INST, MEM AND X represents privatization, institutions, macroeconomic management and all other exogenous variables that can affect growth respectively.

4.0 Discussion and Conclusion

The study reviews the relationship between privatization and macroeconomic management in some selected countries in Africa. The questions asked are; if macro-economic management is related to the privatization process in Africa? It was found that two macro-economic factors property rights promotion (trade openness) and fiscal concerns (government expenditure spending) were probably significant in promoting privatization in Africa.

The question; if privatization was promoting growth was also asked, it was found that privatization gains were probably not likely to be immediate and that privatization was not promoting growth in Africa. Implementing privatization in a strategic manner n an atmosphere where government monitors the programme through protection of domestic firms, encouraging cooperation between foreign and local firms to stimulate technological transfer and transparency in the privatization process could make privatization have useful effects for growth.

The effect of privatization on foreign investment inflow was also investigated it was also found that the privatization process in Africa was not attracting foreign investment sufficiently. Institutions could have stronger implications for investment inflow, since issues of corruption and infrastructural challenges are still quite prevalent in many parts of Africa.

Normal form games provided insights into the maximization concerns for both the private investor and public welfare, it was discovered that private sector profits and national growth (i.e. the welfare or interest of the private investors and governments) could be maximized in a sufficient manner in an atmosphere where there exist efficient and capable monitoring of the privatization process making good macroeconomic management to be useful for the overall privatization process.

Our findings are supported by a host of literature such as Acemoglu D., Johnson S. and Robinson J. (2001) who argues extensively that institutional weaknesses had strong consequences for growth in Africa, Stiglitz (2000) who states that implementing economic reforms without institutional reform could be catastrophic for developing countries and finally the paper by Levy (1989) who argue that predatory investment will lead to price wars, where firms with stronger capital outdo weaker firms, only later to increase prices and weaken competition during the divesture process, making predatory investment to have negative effects for privatization in countries.

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